Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (amended). A method for selecting ~~the~~ a polarization of the laser beam inside a resonant laser cavity operating in Q-switching or Mode-Locking regime, which method provides generation of a laser beam ~~(1)~~ inside said resonant laser cavity ~~(20)~~, comprising an electro-optical modulator and optical media ~~(8,10,9;9',12;9',14;13;33)~~, which include a wedge shaped ~~one or more~~ birefringent optical medium ~~media (9;12;14;13)~~, wherein ~~characterized in that,~~ said birefringent optical medium ~~media (9;12;14;13)~~ is ~~are~~ used for inducing a double refraction effect on the laser beam ~~(1)~~ and, on the interface ~~(22;32;41,42;51,52;61,62)~~ between said birefringent optical medium ~~media (9;12;14;13)~~ and a second medium with a different refractive index, separating ~~the~~ propagation directions of ~~the~~ different polarization components ~~(2,3)~~ of the laser beam ~~(1)~~, providing a plurality of resonance directions ~~(6,7)~~ which are distinct for the different polarization components ~~(2, 3)~~, and wherein an ~~in that the~~ optical axis of the cavity ~~(20)~~ is selectively aligned on one of said resonance directions ~~positions (6,7)~~ through the adjustment of the position of one or more optical elements ~~(8,9,10;9',12;9',14;13,33)~~ forming said resonant laser cavity ~~(20)~~ so as to modulate the loss state of

the resonant laser cavity in cooperation with the electro-optical modulator.

2 (canceled).

3 (canceled).

4 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim ~~2 or 3~~1, wherein ~~characterized in that~~ inside said resonant laser cavity ~~(20)~~ the plurality of resonance directions ~~positions (6,7)~~ corresponds to a plurality of different optical paths enabling a particular polarization ~~and/or wavelength or other laser property~~.

5 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 4, ~~characterized in that it provides for~~further comprising introducing a controlled quantity of losses individually experimented by one or both the polarizations ~~and/or wavelengths~~ in a well delimited path in the resonant laser cavity ~~(20)~~.

6 (canceled).

7 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 4, wherein ~~characterized in that~~ said resonant laser cavity ~~(20)~~ contains a birefringent active laser material for producing the separated polarization components.

8 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 4, wherein

~~characterized in that~~ said resonant laser cavity ~~(20)~~ contains a non linear crystal for producing the separated polarization components.

9 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 4, wherein ~~characterized in that~~ said resonant laser cavity ~~(20)~~ contains a Q-switching or Mode-Locking optical modulator, whose birefringent active optical element is used for producing the separated polarization components.

10 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 1~~one or more of the previous claims~~, wherein ~~characterized in that it uses~~ more than one interface is used between the birefringent medium and another medium for separating the polarizations.

11 (canceled).

12 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 1~~one or more of the previous claims, characterized in that it provides for~~further comprising selecting the polarization ~~or the resonant wavelength~~ through the alignment of a mirror ~~(10;52)~~ pertaining to the optical media of said resonant laser cavity ~~(20)~~.

13 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 1~~one or more of the previous claims~~, ~~characterized in that it~~further comprising

verifying ~~verifies~~ the resonance of a polarization ~~or oscillating wavelength~~ and ~~avoids~~ avoiding total extinction of other possible polarizations ~~or wavelengths~~.

14 (amended). A method ~~for selecting the polarization of the laser beam inside a laser cavity,~~ according to claim 1~~one or more of the previous claims~~, ~~characterized in that it verifies~~further comprising verifying the resonance of a polarization ~~or oscillating wavelength~~ and ~~maintains~~ maintaining ~~the~~ simultaneous oscillation of a well controlled fraction of other possible polarizations ~~or wavelengths~~.

15 (amended). A laser system operating in Q-switching or Mode-Locking regime of the type comprising a laser beam ~~(1)~~ generated in a resonant laser cavity ~~(20)~~, said resonant laser cavity ~~(20)~~ comprising an electro-optical modulator, and optical media ~~(8,10,9;9',12;14;13;33)~~, which include a wedge shaped ~~one or more~~ optical medium ~~media (9;12;14;13)~~ with bi-refringence properties, wherein ~~characterized in that~~ said wedge shaped optical medium ~~media (9;12;14;13)~~ with bi-refringence properties produces a double refraction for polarized components ~~(2,3)~~ of said beam ~~(1)~~ and multiple resonance conditions ~~(6,7)~~ of the resonant laser cavity ~~(20)~~, and wherein ~~that~~ said resonant laser cavity ~~(20)~~ is aligned ~~on~~ in one of said resonance directions ~~(6,7)~~ by means of one or more optical elements ~~(8,10,9;9',12;14;13;33)~~ forming it, for selecting a specific polarization component.

16 (amended). A laser system according to claim 15, wherein ~~characterized in that~~ said resonant laser cavity ~~(20)~~ contains a birefringent mirror ~~(14)~~, ~~consisting of~~ comprising birefringent material with first and second non parallel faces, ~~in particular a wedge, with~~ a said first face ~~(51)~~ being disposed inside the resonant laser cavity ~~(20)~~ and ~~a~~ said second face ~~(52)~~ comprising ~~machined as~~ a mirror, said first face ~~(51)~~ being angled with respect to the second, in a position to operate the separation process of the polarizations, and select them on the desired resonance position ~~(6,7)~~ through the alignment of the mirror itself, or any another optical element ~~(8,10,9;9',12;14;13;33)~~ of the resonant laser cavity ~~(20)~~.

17 (amended). A laser system according to claim 15, wherein ~~characterized in that~~ said cavity contains an active birefringent mirror ~~(9)~~, consisting of birefringent material with first and second non parallel faces, ~~in particular a wedge, with a~~ said first face ~~(32)~~ ~~placed~~ disposed inside the cavity and ~~a~~ said second face ~~(31)~~ comprising ~~machined as~~ a mirror ~~as described above~~ and disposed in a position to operate the separation process of the polarizations, and select them on the desired resonance position ~~(6,7)~~ through the alignment of the mirror itself or any other optical element ~~(8,10,9;9',12; 14;13;33)~~ of the resonant laser cavity ~~(20)~~, and at the same time provide a laser gain to the resonant laser cavity ~~(20)~~.

18 (amended). A laser system according to claim 15, wherein ~~characterized in that~~ said cavity ~~(20)~~ contains a birefringent device ~~(12,13)~~, ~~consisting of~~comprising birefringent material with non parallel first and second faces~~, in particular in the form of a wedge placed inside the cavity (20) as described above~~, the first face ~~(41,61)~~ being angled with respect to the second face~~(42;62)~~ in a position to operate the separation process of the polarizations, and their selection by means of rotation around one of its own axis or realignment of any other optical element ~~(8,10,9;9',12,14;13;33)~~ of said resonant laser cavity ~~(20)~~.

19 (amended). A laser system according to ~~one of the previous claims, characterized in that~~claim 16 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or $Nd:GdVO_4$ or $Nd:YVO_4$.

20 (canceled).

21 (amended). A discrete element solid state laser resonator, containing an electro-optical Q-switching modulator ~~(33)~~, in which modulation of the loss state of the cavity ~~(20)~~ is obtained through the combined effect of the electro-optical modulator ~~(33)~~ and selection of the polarization determined through a wedge shaped birefringent medium~~according to the method of the claims 1 and following claims, or through the use of one or more devices of the claims 15 and following claims~~.

22 (amended). A discrete element solid state laser resonator, operating in Mode-Locking regime, in which modulation of the loss

state of the cavity is obtained with the cooperation of an electro-optical modulator and a wedge-shaped birefringent medium operating a selection of the polarization ~~and/or wavelength and/or another laser feature determined according to the method of the claims 1 and following claims, or through the use of one or more devices of the claims 15 and following claims~~.

23 (new). A laser system according to claim 17 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or Nd:$GdVO_4$ or Nd:YVO_4.

24 (new). A laser system according to claim 18 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or Nd:$GdVO_4$ or Nd:YVO_4.